

# Strategic capacity improvements

Below are strategic capacity investments identified as potential long-term solutions to this extremely congested interstate. Each solution has a benefit and works collaboratively to enhance mobility through the corridor.

	WORK ITEM	BENEFITS
Funded	Extend PSRC Demand Model to SR 510	Allows the use of a single Transportation Demand Model for the entire corridor.
	Widen Freedom Bridge and other improvements at Berkeley St. I/C (OEA grant)	Improves access to Madigan Hospital and reduces backups on the SB off-ramp.
	Install ramp meters along the I-5 corridor and signal at Mounts Gate: implement hard shoulder running and other improvements to the local network (TIGER III)	Makes optimal use of the existing pavement to reduce congestion and operate efficiently without a major investment.
	Evaluate and update work previously done on Thorne Lane I/C	Positions WSDOT to move into detailed design with additional funding.
	Develop an overall corridor plan and environmental assessment, prepare Interchange Justification Reports*	Determines I/C configurations, number of lanes needed and identifies environmental impacts.
Not funded	Construct Thorne Lane I/C and Gravelly Lake-Thorne connector	The new interchange bridge allows four lanes on I-5, improves local access and grade separates RR crossing.
	Build fourth lanes between Berkeley St. and Thorne Lane I/C	Provides four I-5 lanes north of Berkeley; reduces congestion.
	Construct Steilacoom-DuPont I/C	The new interchange bridge is longer to allow four lanes on I-5 and improves mobility to the base.
	Build the fourth I-5 lanes from Main Gate to Berkeley St. I/C	Adds capacity to base and helps relieve congestion in Nisqually vicinity.
	Construct improvements to Main Gate I/C	The interchange is widened to allow four lanes on I-5 and eliminates “weave” conflicts.
	Build the fourth I-5 lanes from Main Gate to Steilacoom-DuPont I/C	Adds capacity and reduces congestion on I-5.
	Replace Berkeley St. I/C	Eliminates the final three-lane chokepoint; completes four lanes on I-5 throughout the corridor.

\* Funded in 2012 Legislation Session

## Working together

WSDOT has worked closely with all the agencies below to identify and implement strategies to reduce traffic congestion. The members of the group have contributed expertise, resources and funds to address short-term and long-term solutions.

Representatives of Joint Base Lewis-McChord have played a strong advocacy role to implement changes in and around the installation. They have contributed staff, funding, base access, information and a positive working relationship.

Pierce County staff contributed a host of resources and some funding to implement congestion-relief traffic measures around Mounts Road Gate.

The City of DuPont was an important participant to the modifications that improved Center Drive and a

knowledgeable resource regarding the impacts operations have on neighboring communities.

The City of Lakewood has provided expertise in the form of traffic studies, reports, advocacy for funding, and grant applications. City staff has been instrumental in bringing congestion issues and potential solutions to the forefront.

The Washington State Patrol has provided firsthand knowledge on traffic circulation patterns. WSP operates the northbound weigh station near Mounts Road and was key in changing operational hours to reduce truck traffic impacts.

The Federal Highway Administration has provided expertise and guidance in allowing flexibility to consider creative solutions.

## Information

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*Engineers’ research shows the cost to the traveling public and freight due to I-5 congestion delay in the vicinity of JBLM is estimated to be over \$16m per year.*



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## Improving travel through a vital transportation corridor



Interstate 5 is the primary transportation route in the state of Washington, connecting Canada, Oregon, California and Mexico. It is also the only continuous north/south route in the state that connects Vancouver to Blaine.

Over the past decade, traffic volumes on I-5 in south Puget Sound have grown significantly, resulting in heavy peak congestion, particularly between SR 510 in Lacey and SR 512 in Tacoma.

This section of I-5 was built in the late 1950s and widened to six lanes in the 1970s. Forty years of population growth have led to traffic demands that have outgrown highway capacity. New large-scaled companies established in the area, increases in Joint Base Lewis-McChord (JBLM) operations and an older highway system have contributed to the daily congestion drivers now experience on I-5.

“**Moving Washington**” is WSDOT’s vision of how it sets priorities and makes investments. It integrates new capacity, efficiencies and commute options to address congestion head-on and improve the performance of the state’s transportation system.

The **Moving Washington** principles – operate efficiently, manage traffic demand, and strategically add capacity – provide the foundation for managing congestion in the JBLM vicinity. This folio describes past accomplishments, ongoing efforts and future plans to continue this effort.



Population growth has strained I-5’s traffic capacity over the past several years, leading to unacceptable congestion and traffic delays.

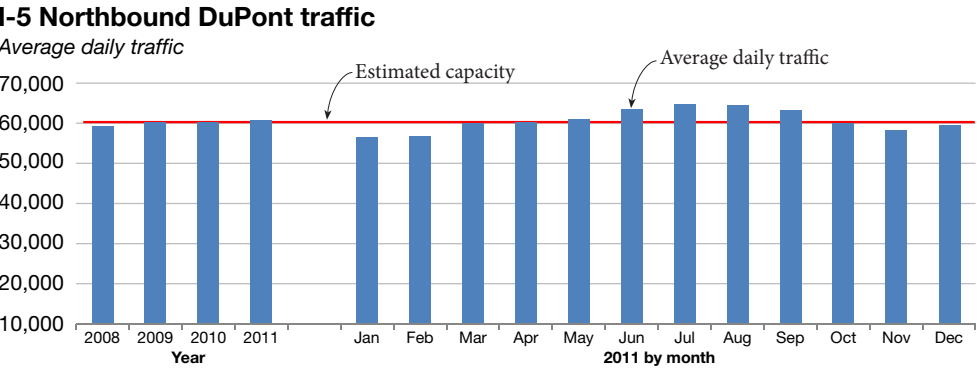
**“More than 152,000 vehicles travel through Joint Base Lewis-McChord (JBLM) gates each day, and 80% of those vehicles use I-5.”**  
-Joint Base Lewis-McChord Growth Coordination Plan

## More demand than capacity

The graph to the right illustrates the pattern of traffic growth since 2008. The freeway routinely operates at peak capacity and in 2011, volumes exceeded the threshold over several months. Without improvements, I-5 can no longer handle daily traffic demands.

In December 2010, the City of Lakewood published the Joint Base Lewis-McChord Growth Coordination Plan. Transportation was a key component analyzed in the plan with regard to JBLM’s impact on the community and surrounding region.

The city’s study recommended several improvements (listed at right) at a cost of nearly \$1 billion. That would provide the overall framework to bring about the much needed, long-term relief.



From the Joint Base Lewis-McChord Growth Coordination Plan:	
PROJECT COMPONENT	ESTIMATED COST*
DuPont Steilacoom Road Interchange	\$22 million to \$72 million**
41st Division Drive Interchange	\$16 million
Berkeley Street Interchange	\$22 million to \$72 million
Thorne Lane Interchange	\$300 million (included in cross-base highway project)
I-5 Mainline Improvements (ITS Auxillary Lanes, General Purpose Lanes)	\$600 million
* Planning level costs only (2010 dollars)	
** Range of costs represent alternate interchange concepts as diverging diamond is less expensive due to reduced additional structure need	



## Completed efforts

Between 2003 and 2010, WSDOT and partners have worked to study and provide low-cost improvements throughout the corridor using the “Moving Washington” principles.

### Prior to 2010

- ✓ Center Drive Study 2005-2009
- ✓ Lakewood Study 2005-2008
- ✓ Interchange Justification Report for Thorne Lane 2003-2005

### July 2010

- ✓ Interchange Justification Report for Center Drive

### August 2010

- ✓ Re-striped Center Drive

### September 2010

- ✓ Re-timed signals adjacent to base
- ✓ Re-timed signals on base
- ✓ Encouraged carpools
- ✓ Repositioned Incident Response
- ✓ Encouraged change of hours on base for physical training

### October 2010

- ✓ NB Steilacoom-DuPont I/C off-ramp improvements
- ✓ Coordinated with WSP for weigh station efficiency
- ✓ Opened Mounts Road Gate

These operational and demand-management improvements were funded through the cooperation of federal, state, and local agencies. The Lakewood Study was funded by a Department of Defense (DOD) grant through the Office of Economic Adjustment (OEA). WSDOT funded improvements along the I-5 corridor at interchanges and surrounding local streets in cooperation with the Federal Highway Administration (FHWA). DOD cooperation and funding has allowed improvements such as opening an additional gate to help divert trips from I-5, and adding personnel at existing gates to expedite entry.

## Funded and ongoing improvements

